

LSI Docket No. 03-0827

Claim Amendments

Please amend the claims as follows:

1. (Currently Amended) A storage system comprising:
a first storage element, comprising
a plurality of disk drives, each configured for storing data; and
a first storage controller communicatively coupled to a host computer system and configured for processing I/O requests received from the host computer system,
wherein the first storage controller is adaptable to interface with [[a]] any number of second storage controller controllers added to the storage system within [[a]] any number of second storage element elements, and
wherein the first storage controller is further adaptable, when adapted to communicate with any of the second storage controller controllers, to route the I/O requests to [[the]] a selected second storage controller through a switching fabric,
wherein the first storage controller is adapted to interface with the selected second storage controller via an optional plug-in card ("PIC"),
wherein the PIC provides circuits not present on the first storage controller to enable N-way connectivity of the first storage controller with said any number of second storage controllers.
2. (Original) The storage system of claim 1, wherein the storage system is a RAID storage system.
3. (Currently Amended) The storage system of claim 1, wherein the switching fabric is an SAN switching fabric communicatively coupled to the first and the selected second storage controllers and configured for routing the I/O requests between the host computer system and the first and the second storage controllers and comprising at least one of Fibre Channel and Infiniband.

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4. (Currently Amended) The system of claim 3, wherein the storage system is adaptable to identify physical storage locations of both the first and the second storage elements using ~~an I/O module~~ the PIC added to the storage system when the first storage controller is adapted to communicate with the selected second storage controller.

5. (Currently Amended) The storage system of claim 4, wherein the PIC when coupled to the first storage controller comprises an N-chip configured for communicatively coupling to the SAN switching fabric to route a portion of the I/O requests from the host computer system through the SAN switching fabric to the selected second storage controller, wherein the N-chip is further configured for accessing data from the physical storage locations of both the first and the second storage elements ~~to the I/O module~~.

6. (Currently Amended) A method of processing requests from a host computer system, comprising:

receiving requests from a host system in a first storage controller of a first storage element wherein the first storage element includes a plurality of storage locations in storage devices coupled to the first storage controller and wherein the first storage controller has an optional plug-in card ("PIC") for optionally enabling N-way connectivity between the first storage controller and any number of second storage controllers each associated with a corresponding second storage element;

transferring the a first portion of the received requests from the ~~host computer system to a first storage controller of a first storage element~~ to a selected second storage controller through the PIC of the first storage controller; and

processing the requests to access physical storage locations within the first storage element ~~second storage controller~~;

~~wherein transferring comprises~~

~~forwarding a first portion of the requests from the first storage controller to a second storage controller of a second storage element.~~

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7. (Currently Amended) The method of claim 6, further comprising processing the first portion of the requests with the second storage controller to access physical storage locations on storage devices within the second storage element.

8. (Canceled)

9. (Canceled)

10. (Currently Amended) The method of claim 6, wherein transferring the first portion of the requests comprises switching the first portion of the requests via the PIC through [[an]] a SAN switching fabric selected from at least one of Fibre Channel and Infiniband.

11. (Currently Amended) A first storage controller operable as a standalone storage controller, comprising:

a host interface configured for communicatively coupling a host computer system to a first storage element;

a storage system interface configured for communicatively coupling the first storage element to a switching fabric; and

a processor configured for processing I/O requests received through the storage system interface and the host interface to access physical storage locations; and

an interface for receiving an optional plug-in card ("PIC") wherein the PIC provides additional circuitry to enable N-way connectivity between the first storage controller and any number of second storage controller to permit scaling of the first storage controller to operate in a network architecture storage system,

wherein the storage system interface is further configured for transferring a portion of the I/O requests through the switching fabric to a selected second storage controller.

12. (Currently Amended) The storage controller of claim 11, wherein the first storage controller is adapted to route the portion of the I/O requests to [[a]] the selected

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second storage element controller and wherein the portion of the requests are processed by the selected second storage controller for accessing physical storage locations ~~within the second storage element~~ coupled to the selected second storage controller.

13. (Canceled)

14. (Canceled)

15. (Canceled)

16. (Currently Amended) A method of storing data, comprising:
providing a first storage element having a first storage controller capable of interfacing with one or more host computer systems and capable of operating as a standalone storage controller in the first storage element;

~~configuring a first storage element with a~~ the first storage controller capable of interfacing with a host computer system and a switching fabric to add an optional plug-in card ("PIC") to add capability of the first storage controller for N-way communication with any number of second storage controllers within any number of second storage elements; and

at least one of:

transferring I/O requests from the host computer system to the first storage controller to access a plurality of physical storage locations within the first storage element and

transferring I/O requests from the host computer system via the PIC through the switching fabric to a selected second storage controller ~~configured with a second storage element~~.

17. (Currently Amended) The method of claim 16, wherein transferring I/O requests from the host computer system via the PIC through the switching fabric to the selected second storage controller comprises processing the I/O requests with the selected

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second storage controller to access physical storage locations within the second storage element.

18. (Canceled)

19. (Canceled)

20. (Currently Amended) The method of claim 16, wherein transferring the I/O requests comprises switching the I/O requests via the PIC through ~~[[an]]~~ a SAN switching fabric selected from at least one of Fibre Channel and Infiniband.